paso professional audio & sound®

Infratech2®

PIRA250

POWERED INFRARED WIRELESS MICROPHONE SYSTEM

OPERATION MANUAL

TÜV CERT
DIN EN ISO 9001
Certificate NO:09 100 89126

UL C US

FC

Paso Sound Products, Inc. RoHS GREEN PRODUCT
GREEN PRODUCT
RoHS Compliant

Manual
OM 237
REV. 1.0

CAUTION !

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

USER'S MANUAL

Thank you for purchasing our infrared wireless microphone system. Please be sure to read the manual thoroughly to be fully familiarized with its functions and keep it for future reference.

SYSTEM CONFIGURATION

①

PIRA250
Base Station Receiver

②

Power Supply
for PIRA250

③

MIW333
Beltpack Transmitter

④

MIW335
Handheld Transmitter

⑤

MIR63
IR Emittor Microphone

⑥

PIRT33
Mic Interface Sensor

⑦

ML63
Lavalier Microphone

⑧

MLI63
Short Microphone

⑨

MHS63
Headset Microphone

⑩

MC63
Collar Microphone

⑪

PIRS360
Ceiling Sensor

⑫

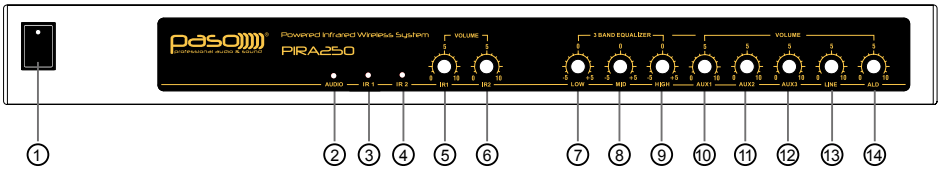
PIRS120
Wall Sensor

⑬

XC33
Charging Station

INFRARED RECEIVER

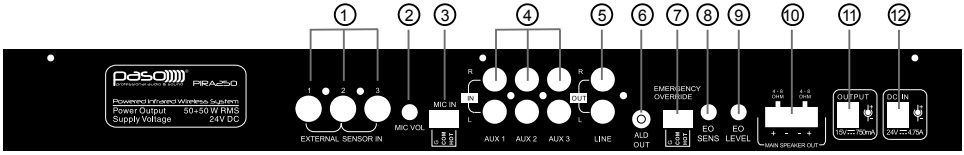
PIRA250 FRONT PANEL



Parts and Functions:

1. Power switch
2. Audio indicator
3. IR1 reception indicator
4. IR2 reception indicator
5. IR1 volume control
6. IR2 volume control
7. Low-tone control
8. Mid-tone control
9. High-tone control
10. Aux1 volume control
11. Aux2 volume control
12. Aux3 volume control
13. Line-in volume control
14. Volume control of assistive listening device

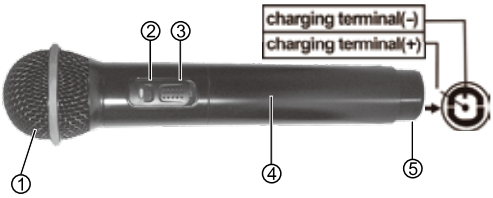
REAR PANEL

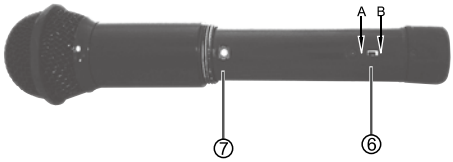


Parts and Functions:

1.External sensor input-Allows 3 external sensors to be used with this system.
2.Mic In volume control
3.Mic In
4.Aux In-Allows 3 audio sources to apply to this system.
5.Line Out
6.Audio output connector for assistive listening device. The volume level can be adjusted individually via the volume knob (14) on the front panel of PIRA250.
7.Emergency Override-When this function is activated, all operation of this unit will be stopped temporarily, emergency audio source will be amplified through this input. This function is specifically designed for emergency or public broadcast.
8.Sensitivity setting of emergency override (EO)-Clockwise to increase the sensitivity of EO.
9.Volume setting of EO-Clockwise to increase the volume of EO.
10. Main speaker out
11.DC output-Provides power supply to another system such as XC33.
12.DC In

Handheld Transmitter MIW335
Parts and functions



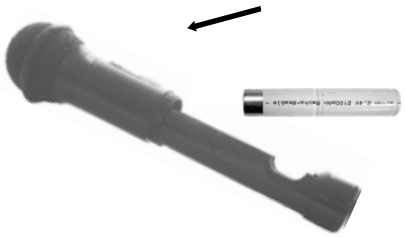


1.Grille cover.
2.Status LED: Bicolor LED will glow when switch is put to ON :
Green : Battery is full and transmitter is in normal mode.
Red : Battery is weak and will shut off soon. Please charge the battery.
3.Power switch
Slide to turn microphone on or off.
4.Battery compartment.
5.Infrared emitter with charging contacts.
(IR ray radiates from here. Do not block or hold this part of the body.)
6.Channel selector. A stands for 2.08MHz and B stands for 2.54MHz.
7.Sensitivity control. Clockwise to increase sensitivity level. Factory preset is max level.

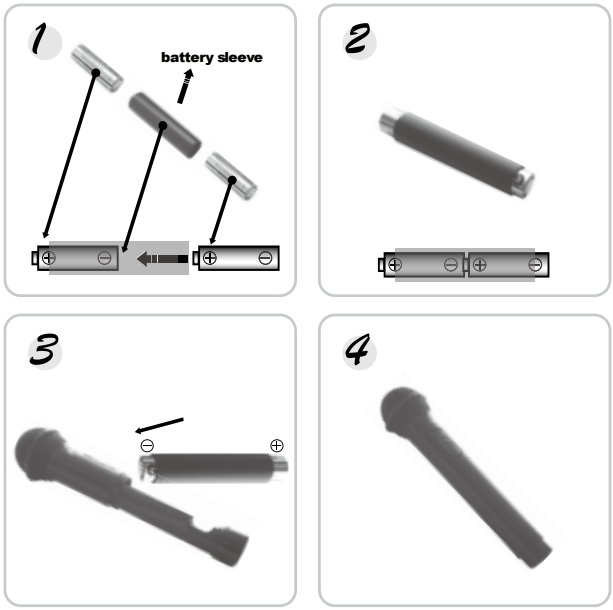
Battery Installation/Replacement

Turn the battery cover counterclockwise and pull out. As shown in figure.
Make sure the power switch is in OFF position when installing or replacing batteries.
And then install the new battery according to its correct polarity.

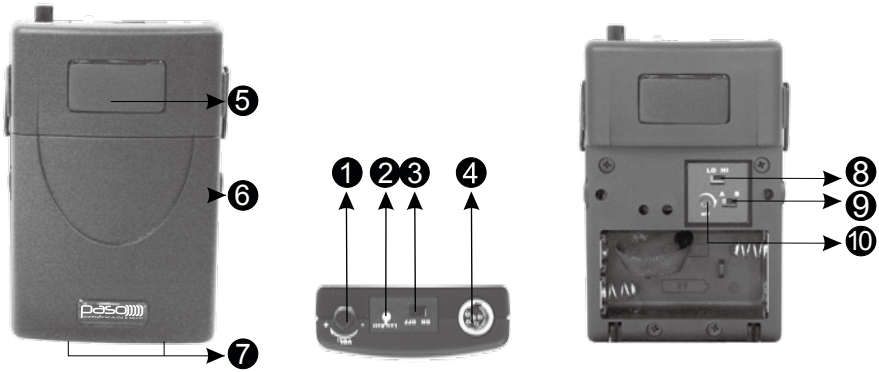
A. Battery installation (2100mA / 2.4V x 1)



B. Battery installation (AA x 2)



Beltpack Transmitter MIW333
Part and functions:



1.Volume control
2.Bi-color Power / Battery status indicator:
3.Power switch
4.mini XLR socket
5.Infrared emitter
6.Cover-release button
7.Charging contacts
8.Emission power selector
9.Channel selector
10.MT gain control

Various Settings in MIW333

Channel Selection:

First open the cover of MIW333's battery compartment by pressing its release buttons on both sides. There are 2 channels for selection, namely "A" and "B" A stands for 2.08MHz and B stands for 2.54MHz.

Making Changes to MT:

Low-impedance "MT" gain control is located inside the battery compartment. It can be adjusted by using a small screw driver to rotate till a desired audio output level is selected.

BATTERY OPERATING TIME

Continuous operating time of fully charger Ni-MH 2100mA/2.4v battery is as follows:

Emission Power level	Lo position	Hi position
Operating time	6 hours	4 hours

*Operating times are approximate and not guaranteed.

Battery installation/replacement

To install the batteries, first open the battery compartment by pressing the release buttons on both sides of the MIW333. Batteries used are 2 pcs of NiMH 1.2V/2100 mAH type(rechargeable) or Alkaline type(not rechargeable). When inserting batteries, please place them according to the correct polarity.

Various Microphones for the MIW333

1. MIR63
   Parts & Functions

1. mini XLR connector
2. IR emitter
3. mic capsule

Usage: Plug the XLR connector to the XLR socket of MIW333.

2. PIRT33
   Parts & Functions

1. mini XLR connector
2. IR emitter
3. clip
4. mic input

Assistant microphones for PIRT33

ML63
Lavalier Microphone

MHS63
Headset Microphone

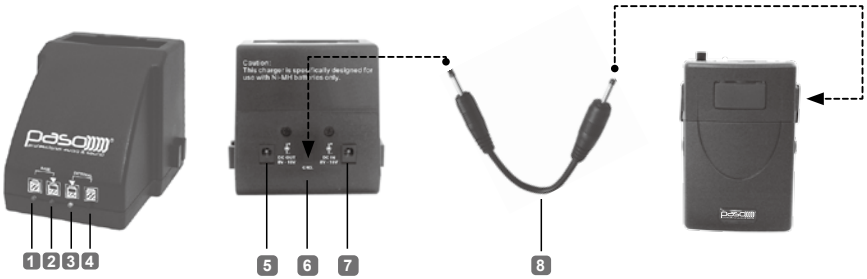
MC63
Collar Microphone

MLI63
Short Microphone

Usage: Plug the XLR connector of ML63 / MHS63 / MC63 / MLI63 to the XLR socket of PIRT33.Then plug this set into the MIW333.

Charging Station XC33

Parts and Functions:



1.Fully charged
2.Charging
3.Charging (Rear)
4.Fully charged (Rear)
5.DC input
6.DC output
7.Charging socket (Rear)
8.Charging cable

Charging the transmitters:

1.Make sure that the batteries installed in the transmitter are rechargeable NiMH type and transmitter power has been turned off.
2.Connect the adaptor to the DC IN port of XC33 with its end to the wall outlet or DC output of PIRA250.
3.Place the transmitter into the slot and charging process will start automatically.
4.When another transmitter has to be charged simultaneously, simply connect a charging cable between the external charging port and this transmitter.
5.There are 2 sets of LED to indicate the charging condition of both transmitters. The left set indicates the front transmitter and the right for the rear one. During charging the RED LED will keep lit. When charging is finished, the process will stop automatically and the GREEN LED will light up.

CAUTION!!
The above chargers are specially designed for Ni-MH battery used in portable transmitters/receivers only. Before charging, please make sure that the batteries are Ni-MH rechargeable type.
Never try to charge an ordinary Zinc oxide or Alkaline battery as this may result in explosion or fire.

OPERATING THE SYSTEM

1. Plug the adaptor in a nearby outlet and then connect the DC plug of adaptor to your receiver.
2. Connect the receiver to speaker and turn on the PIRA250.
3. Slide the power switch of microphone to "ON". Then the channel indicator of receiver will light up.
4. Adjust the volume control of amplifier to a comfortable level.
5. Find the best position with a wide view of the room then set the receiver.

CAUTIONS:

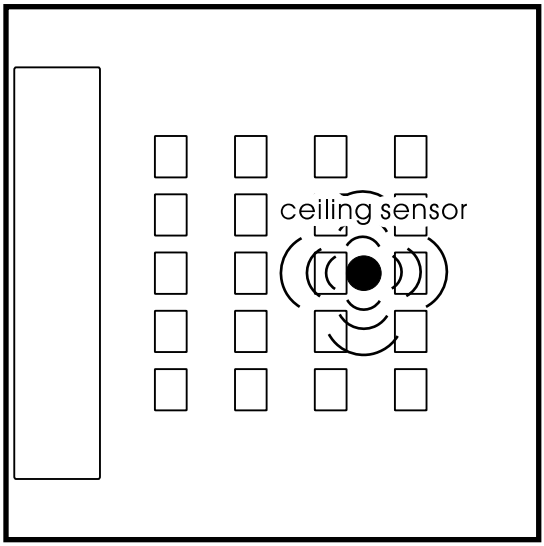
- Do not cover the infrared emitter area of the wireless microphone or the surface of the infrared sensor, which may disturb the unit and cause abnormal operation.
- Since the unit uses infrared reflectance. Do not expose receiver to the black ceiling or wall which may cause abnormal operation.
- Do not use the microphones near speakers which may cause feedback.
- Prevent the microphone from getting wet and avoid dropping.
- Do not replace the battery when power is on.
- Do not install the unit near heat source or in a place subject to direct sun-light, excessive dust, mechanical vibration or shock.

Ceiling Sensor PIRS360

PIRS360 has a wide reception of 360-degree angle to see the entire room at once. Users can select 1, 2 or more PIRS360 to operate with PIRA250 receiver according to different locations. Below are 2 examples for sensor placement of 1 and 2 PIRS360 in two applications.

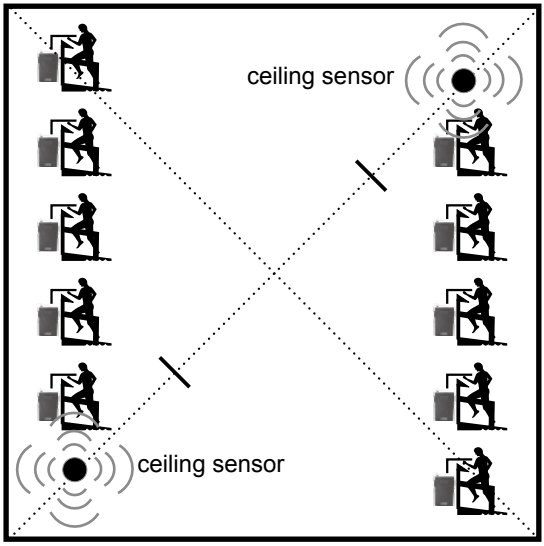
A.In an ordinary space such as a classroom

1.Locate the PIRS360 sensor in the middle of the ceiling (as illustrated in below picture).
2.Connect the sensor cable to PIRA250.
3.Turn on the IR system and amplifier then operation can be started.



B.In a larger space such as a fitness center

1.Locate 2 PIRS360 sensors on the suggested positions on the imaginary catercorner of the ceiling (as illustrated in below picture).
2.Connect both sensor cables to PIRA250.
3.Turn on the IR system and amplifier then operation can be started.



Specification:

PIRA250: Base Station Receiver	
ITEM	**PRODUCT SPECIFICATIONS**
Receiving frequency	2.08MHz & 2.54MHz
Modulation	FM wide-band
IR frequency response	50Hz to 12kHz
Speakers	6 to 8 Ω
Speakers output power	50W+50W (4 Ω) / 25W+25W (8 Ω)
Acoustic output	90dBa ± 3dB @ 1m into 8 Ω
Auxiliary input level	-18dB ± 3dB
Auxiliary input impedance	15k Ω, Nominal
Signal-to-noise	>65dB
Image rejection	>40dB
THD	<1% @ 1kHz into 8 Ω
Maximum deviation	± 22k Hz
Squelch	RF carrier/tone control
Squelch level / Reception sensivity	32 dBuV ± 2 dBuV
Power supply	Input : 100~240VAC / 50-60Hz /1.5A (typical, with switching adaptor)
	Output : 24V / 2.5A (60W)MAX (typical, with switching adaptor)
	@ might change 20V or 28V
User controls	Power on; AUX1 & AUX2 & AUX3 & IR1 & IR2 volumes; 3-band equalizers; mic volume (back); EO sens (back); EO level (back).
Displays	LEDs for "IR1"; "IR2"; "AUDIO"; Red IR1 & Yellow IR2 LED indicates IR signal reception; Green LED indicates audio signal reception.
Color	Black case,plastics front face
Size	42 x 18.8 x 4.5cm/16.5 x 7.4 x1.77in
Weight	1.6kg/3.7lbs, 1.93kg/4.45lbs (with switching adaptor)
Case	Steel, baked enamel finish, solid ABS plastic front face
Operating range	20 m line-of-sight (typical, with ceiling sensor)
Reception area	240 m² (typical with ceiling sensor)
Reception angle	360° full semi-spherical (half dome coverage; typical, with ceiling sensor)
Inputs/outputs	3 RCA stereo (L/R) aux in jacks; RCA stereo (L/R) line out jack; 3 RCA jacks for external sensor connection; 2.0mm input power jack; 2.0mm output power jack; 5.08mm combicon connector for main speaker out connection; 3.81mm mini-combicon connector for emergency override connection; 3.81mm mini-combicon connector for mic in connection.

MIW333: Beltpack Transmitter	
ITEM	**PRODUCT SPECIFICATIONS**
Transmitting frequency	2.08MHz & 2.54MHz (switchable)
Modulation	FM wide-band
Frequency response	50Hz to 10kHz
Operating range	20 m line-of-sight
Transmission angles	160° horizontally; 40° vertically
Microphone type	uni-directional hyper-cardioid
User controls	Switch [on/off]/volume/channel (A/B)/sensitivity (MT)/power(Hi/Lo)
Inputs/outputs	5 pin XLR mic input; 0.6x0.6mm charge bomb-splinter.
Battery life	maximum 8 to 9 hours @ Hi power (dual AA, 2600mAh rechargeable NiMH)
	maximum 16 to 18 hours @ Low power (dual AA, 2600mAh rechargeable NiMH)
Size	7x10.5x2.9cm/2.8x4.1x1.2in
Weight	90g/0.21lbs, 140g/0.32lbs (with batteries), 170g/0.39lbs (with batteries and MIR-63)
Case	ABS plastic

MIW335: Handheld Transmitter	
ITEM	**PRODUCT SPECIFICATIONS**
Transmitting frequency	2.08MHz & 2.54MHz (switchable)
Modulation	FM wide-band
Frequency response	50Hz to 12kHz
Transmission angle	360° radial
Audio distortion	<1.0% (± 15kHz deviation @ 1kHz)
Microphone type	uni-directional dynamic
User controls	Switch [on/off]/channel (A/B)/sensitivity
Battery life	maximum 8 to 9 hours (dual AA, 2600mAh rechargeable NiMH)
Size	23.7x5.7cm/9.3x2.2in
Weight	230g/0.53lbs, 300g/0.7lbs (with batteries)
	Aluminum, baked enamel finish

PIRS360: Ceiling Sensor / **PIRS120:** Wall Sensor		
ITEM	**PRODUCT SPECIFICATIONS**	
Operating frequency	2.08MHz & 2.54MHz	2.08MHz & 2.54MHz
Operating range	20 m line-of-sight (typical)	20 m line-of-sight (typical)
Signal/Power interface	F-female jack, 8" lead	F-female jack, 8" lead
Number of IR LEDs	6	6
Power indicator LED	Red	Red
Reception area	240 m² (typical with receiver)	240 m² (typical with receiver)
Reception angle	360° full semi-spherical (half dome coverage)	180° full semi-spherical (half dome coverage)
Dimensions	11x3.9 cm/4.33x1.54in	11x3.9 cm/4.33x1.54in
Weight	210g/0.48lbs (with bracket)	210g/0.48lbs (with bracket)
Mounting	Drop ceiling acoustic tile or sheetrock ceiling	Drop ceiling acoustic tile or sheetrock ceiling
Sensor wire	10m (RCA male-to-male) Flexible Plenum Jacket Type	10m (RCA male-to-male) Flexible Plenum Jacket Type
Case	Plastic, solid steel bracket	Plastic, solid steel bracket

XC-33: Charging Station	
ITEM	**PRODUCT SPECIFICATIONS**
Input voltage	12VDC 500mA (SUPPLIED FROM PIRA-250 OR OPTIONAL (PX33) AC ADAPTER)
Charge time	maximum 8 to 9 hours
Charge rate	300 mA @ 8V (C/6)
Charge detect	Peak voltage and Timeout
Protection	Shorting protection; peak voltage protection; over charging
Operating temperature range	0 -35°C on cell surface
Suitable batteries	dual AA, 2400 ~ 2700mAh rechargeable NiMH
User controls	Discharge button
Displays	LEDs for "FULL"; "CHG."; "COND."; Green LED indicates fully charged; Red LED indicates charging; Yellow LED indicates discharging; 2.0mm input power jack; 2.0mm output power jack.
Size	12x10x9.3cm/4.7x3.9x3.7in
Weight	180g/0.42lbs, 490g/1.13lbs (with 12VDC/500mA adaptor)
Case	ABS Plastic

CUSTOMER SERVICE

REPLACEMENT PARTS
Please provide complete information when you request replacement parts from either the Factory or a Paso Authorized Distributor. Be certain to include the Part Number and Description as it appears on the parts list, the Model Number of the unit and if possible the Serial Number and the date of purchase of the unit. Replacement parts inventory is maintained specifically to repair Paso products. Part sales for other reasons or applications will be declined.

ORDERING FROM THE FACTORY
Print all information on a purchase order form and mail to:
PASO SOUND PRODUCTS, INC.
4750 Goer Drive - Building F
CHARLESTON, SC 29406

Be sure to include the following:
- Paso part number
- Part description
- Quantity required
- Model number of the unit
- Serial number of the unit
- Your payment or your authorization for COD shipment for parts not covered by the Warranty or if your company has a current account with the factory

RETAIN ORIGINAL PARTS (IN WARRANTY) UNTIL YOU RECEIVE REPLACEMENTS. DEFECTIVE PARTS THAT SHOULD BE RETURNED TO THE FACTORY WILL BE LISTED ON YOUR PACKING SLIP.

For your convenience replacement parts are also available through Paso Authorized Distributors and Dealers nation wide. Obtain a location list directly from the Factory or your regional Paso Representative.

TECHNICAL CONSULTATION
- Need help with your installation ?
- Need help with the operation of the unit ?
- Need help with a repair ?

Call or write for assistance. You will find our Technical Dept. eager to help or assist you with any technical problem you may have encountered except "`Customizing" for a unique application.

The effectiveness of our consultation service depends on the accuracy of the information you furnish.
Be sure to tell us:
- The Model and Serial number of the unit
- The date of purchase
- An exact description of the difficulty
- All trouble-shooting done in attempting to correct the problem

Call our toll-free phone number:
1-800 231 3034

REPAIR SERVICE
Repair service for out of warranty Paso products may be obtained form your local Paso distributor or any other qualified repair station.

In warranty repairs must be returned to the Factory. Prior authorization must be obtained from the Factory. Products received without authorization will be refused by our Receiving Department.

IN WARRANTY REPAIR SERVICE
Call or write the Factory to obtain an authorization to return
the product for repairs.

Pack the equipment in the original carton or in a strong carton with at least THREE INCHES of resilient packing material on all sides, top and bottom. Seal the carton with reinforced tape and mark it FRAGILE on at least two sides. Remember, the Carrier will not accept liability for shipping damages if the unit is improperly packed.

EQUIPMENT RECEIVED IN DAMAGED CONDITION DUE TO POOR PACKING WILL BE REFUSED AND THE WARRANTY COVERAGE IS AUTOMATICALLY VOIDED.

The Paso Sound Limited Warranty provides:

The examination of the returned product must disclose in our judgement, a manufacturing defect. The warranty does not extend to any product that has been subject to misuse, neglect, accident, improper installation or where the serial number of the product has been removed or defaced.

Ship via insured prepaid United Parcel Service or Parcel Post to:

PASO SOUND PRODUCTS, INC.
4750 Goer Drive - Building F
CHARLESTON, SC 29406
ATTN. SERVICE DEPARTMENT
The equipment will be returned freight prepaid after repairs.

Be sure to include the following:
- Your name and address
- Date of purchase and copy of invoice
- A brief description of the difficulty
- A return address shipping label
-

OUT OF WARRANTY REPAIR SERVICE
Follow return instructions as per in warranty repair service. Prior to performing all necessary repairs, you will be advised of the charges and at that time a written authorization by you will be required including authorization to return the equipment COD for the service and shipping charges. This will avoid unnecessary delays

Paso Sound Products, Inc.

Web site: http://www.pasosound.com E-mail: info@pasosound.com

475 0F Goer Drive- Charleston , Sout h Carolina 29406 / TEL: 1-800-231-303 4 FAX : 843-308-0904

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